FACTSHEET

BUSINESS MANAGEMENT

ORDER NO. 06-085

AUGUST 2006

AGDEX 818

Ontario Ministry of Agriculture, Food and Rural Affairs

DIAGNOSING AND MANAGING CASH FLOW PROBLEMS

R. W. Gamble

(Replaces OMAFRA Factsheet "*Troubleshooting Your Farm Business,*" Order No. 00-107)

While every business owner hopes their business will never have financial problems, in reality most experience financial pressure at some point in their existence. This Factsheet is designed to help you diagnose a cash flow shortage and take some steps toward correcting it.

The sooner you can diagnose the problem the better. Early diagnosis gives you more time to make decisions and more options concerning your farm business.

EARLY WARNING SIGNS — CASH FLOW

Most farm businesses become aware of potential financial problems when cash flow becomes tight. Obligations become increasingly difficult to meet in the short and medium term. This may indicate a temporary short-term problem (such as a poor growing season) that will correct itself in time, or it may indicate a more serious long-term problem.

Your first step is to determine if the problem is short or long-term. The distinction between the two is important. Long-term problems require significant business adjustments to correct and, if left uncorrected, have the potential to result in business failure.

THREE STEP ANALYSIS OF CASH FLOW

There is a simple three step approach to diagnose a cash flow problem.

Step 1 – Determine if the current cash flow shortage is short or long term
Step 2 – Calculate business equity
Step 3 – Identify the primary cause of the cash flow problem

Once these steps are completed you can determine what options are available.

STEP 1 – Determine if the current cash flow shortage is short or long term

Projected Debt Servicing Capacity Worksheet

Completing a projected debt servicing capacity worksheet will indicate if you have enough cash to cover all your obligations in the coming year. The projected figures you use should include both an optimistic and a pessimistic forecast. While you hope for an optimistic outcome, you should be prepared for the pessimistic one.

The debt servicing capacity worksheet summarizes several key pieces of financial information. Likely you will need to gather the information from other records to come up with the following:

- farm cash revenue and expenses
- off-farm income or other owners contributions.
- owners withdrawals — how much is required from the business to cover personal living expenses and taxes
- reserve for asset acquisition — this could be a depreciation figure or an estimate of the funds needed in the coming year to make capital purchases

Some banks include the value of saleable inventories on hand in the calculation of farm cash revenue. This is a reasonable approach and you might want to include the value of inventory that is expected to be in storage in your cash revenue projections.

Table 1, *Debt Servicing Capacity* shows an example of the calculation. A blank worksheet for your use can be found in Appendix 5.

TABLE 1. Debt Servicing Capacity

PROJECTED YEAR	
+ Farm Cash Revenue	$380,000
– Farm Cash Expenses	$328,000
= Net Cash from Operation	**$52,000**
+ Interest Payments	$18,000
+ Owner's Contributions	$8,000
– Owner's Withdrawals (including taxes)	$42,000
= Cash Available for Principal and Int.	**$36,000**
– Principal and Interest Payments	31,000
Cash Available After P & I Payments	$5,000
– Depreciation or Reserve for Asset Acquisition	$20,000
Debt Servicing Capacity	**($15,000)**

This example shows that there is cash available to cover the interest and principle payments but not enough to cover depreciation. Depreciation or a reserve for asset acquisition is used to replace assets as they wear out. In this example, a shortage of $15,000 exists.

Back of the envelope analysis — the information summarized in the debt servicing capacity worksheet can also be used to project breakeven prices for crops or livestock. The total of principal and interest payments, owners withdrawals and operating debt can be divided by the projected production to determine the breakeven price needed.

STEP 2 – Calculate business equity

Knowing your equity position enables you to judge the businesses' ability to survive the cash shortage. A cash flow shortage that persists ultimately reduces the owner's equity. High equity businesses have the ability to withstand a longer and more serious cash flow shortage because they can re-borrow against their equity. Businesses with low equity are unable to tolerate cash flow shortages and therefore are at much greater risk.

Knowing your equity position also allows you to pre-determine the minimum level of equity that you wish to maintain in the business. This is important because the equity in the farm business represents the retirement savings for many farmers. It is important to protect that investment. You may, for example, decide that you will not let your equity percentage fall below a certain amount, say $250,000. If you know your current equity position and the projected cash shortfall you can calculate if you are at risk of falling below that amount.

Equity can be determined by subtracting your total liabilities from your total assets. To determine the equity as a percentage divide your equity by your total assets and multiply by 100.

The equity of the business is always stated on the balance sheet, but it can vary widely depending on how the assets are valued. Statements prepared for accounting purposes use cost less depreciation to value assets, which is the purchase cost of the asset minus the depreciation taken for tax purposes. Statements prepared for lenders use fair market value, which is the sale value of the asset. For the purpose of evaluating your business equity you should use conservative fair market values.

$$\text{Percent Equity} = \frac{\text{Equity}}{\text{Total Assets}} \times 100$$

E.g. $\frac{420{,}000}{650{,}000} \times 100 = 64\%$

STEP 3 – Identify the primary cause of the cash flow problem

The most important and the most difficult step in the process is identifying the cause of the cash flow shortage. This can be done by examining the following three areas:

1. efficiency
2. scale of the business
3. debt structure

Efficiency

Some producers might immediately feel defensive when the word efficiency is used. Often they have worked very hard at becoming more efficient only to see returns diminish. Sometimes this is because of depressed commodity prices. However it is important to determine if the cash flow problem will continue even after prices increase. If the efficiency of the business is only slightly below average even good prices may not generate the profits needed to maintain a positive cash flow.

Efficiency is measured by the physical and economic output of the business. Because there is no one measurement of efficiency you must look at a combination of physical and economic measurements such as yield per acre or variable costs per unit of output.

Table 2, *Farm Case Study*, compares the financial figures of two sample farms. Farm 1 has a higher cost of producing a dollar of product and a higher percentage of variable costs. This suggests that efficiency may be a problem and the reasons for these differences should be investigated further.

Scale of the business

Scale refers to the size of the business. Farms can be too large or too small in relation to the amount of labour used in the business. In large complex operations, managerial control may be spread too thin. In smaller farms there may be too much labour. Or in farms where only the owner is employed in the business the scale of the farm may still be too small to fully support their labour, creating a cash flow shortage.

Where this occurs the options available are: to further increase the size of the business; decrease costs; or attempt to find a higher value product that generates larger margins.

One method of accessing scale is to examine the efficiency of labour usage in the business and compare it to other similar operations. In Table 2, Farm 1 has a below average number of animals produced per person. In this case the there may be too much labour on Farm 1 or the business is too small.

TABLE 2. Farm Case Study

Case Study Comparison	Farm 1	Farm 2	
Farm Cash Revenue	$524,000	$330,000	
Farm Cash Expenses	$439,000	$275,000	
Net Cash from Operation	**$85,000**	**$55,000**	
Interest Payments	$35,000	$18,000	
Owner's Contributions	$4,000	$15,000	
Owner's Withdrawals	$68,000	$41,000	
Cash Available For Principal and Interest	$56,000	$47,000	
Principal and Interest Payments	64,000	51,000	
Cash Available After Principle & Interest Payments	**($8,000)**	**($4,000)**	
Depreciation or Reserve for Asset Acquisition	$26,000	$19,000	
Debt Servicing Capacity	**($34,000)**	**($23,000)**	
Profitability			**Bench-marks**
Net Income (Accrual)	$59,000	$36,000	
Return On Assets	4.9%	9.0%	9.5%
Return On Equity	11.80%	10.0%	11.4%
Financial Strength			
Equity	41.7%	60.0%	65.8%
Financial Efficiency			
Cost of producing $1 dollar of product	$0.84	$0.78	$0.56
Variable Costs as a % of Revenue	83.8%	70.3%	63.5%
Scale			
Full time person equivalents	2	1.5	
Animals produced per person	1,510	1,980	
Debt Structure			
Debt to Asset Ratio	0.58 to 1	0.40 to 0.1	0.34 to 1
Percentage of current liabilities compared to total liabilities	14.0%	41.7%	27.3%

Benchmarks are taken from the 2001 Ontario Farm Management Analysis Project

Debt Structure

Debt structure is the term used to describe the factors that determine the size of your principle and interest payments. These factors are interest rate, size of the debt, the length of the term and the proportion of short term debt to long term debt. Each of these can affect the size of the debt payment required which of course impacts the cash flow of the business.

A farm business can limit its efficiency, scale and earning capacity by deciding to use little or no debt capital. For the most part however, debt structure problems arise when the debt load is excessive, too expensive or must be paid off over too short a term.

Some debt structure problems are relatively easy to resolve — for example, lengthening loan terms to improve cash flow. Most, however, involve adjusting the asset or liability structure of the business. Farmers might sell assets and reduce liabilities. Or they may simply attempt to eliminate assets that have debt service requirements in excess of their cash-generating potential.

Farm 2 in the Table 2 case study appears to have too much short-term debt. The percentage of current liabilities to total liabilities at 41.7% suggests that the term on the debt may be too short. (The amount of principal and interest that is due in the current year is considered a current liability.)

SUMMARY

The three areas of efficiency, scale and debt structure are important in diagnosing a cash flow problem. The next few pages outline possible action steps that can be taken once a cause is identified. Not all of the solutions will be applicable to individual situations. Also it is clear that some of the suggested solutions may be difficult to implement because they require significant changes to the business or family members or both. Nevertheless when a cash flow shortage is a long term problem decisive action must be taken.

Consider the following general advice in times of cash flow shortages.

- Devote time to examining and preparing financial statements such as the balance sheet and cash flow statements. If this is not your strength get some help from a trusted advisor.
- Seek the help of advisory services such as those outlined in Appendix 1.
- Aggressively pursue production and market price risk management strategies such as crop insurance, government business risk programs when it is cost effective to do so. Commodity marketing strategies such as forward contracting, futures and options should also be considered as part of an overall marketing strategy. Risk management is especially critical if you are experiencing financial stress and therefore, have little tolerance for downside events.

Cautionary Note About Ratios — Whenever ratio or financial indicators are used it is important to remember that a ratio outside a normal range is just a flag to prompt you to investigate further. In many cases there may be an explanation for the abnormal figure. Ratios cannot be used on their own to diagnose the problem; they only help you to narrow down your search.

TROUBLESHOOTING WITH A DIAGNOSTIC TREE

Figure 1, *Financial Troubleshooting Diagnostic Tree*, is a tool that helps examine the efficiency, scale and debt structure of a farm business. The purpose of the decision tree is to provide a stepwise procedure for determining if the business is "OK" or "Not OK" in these areas.

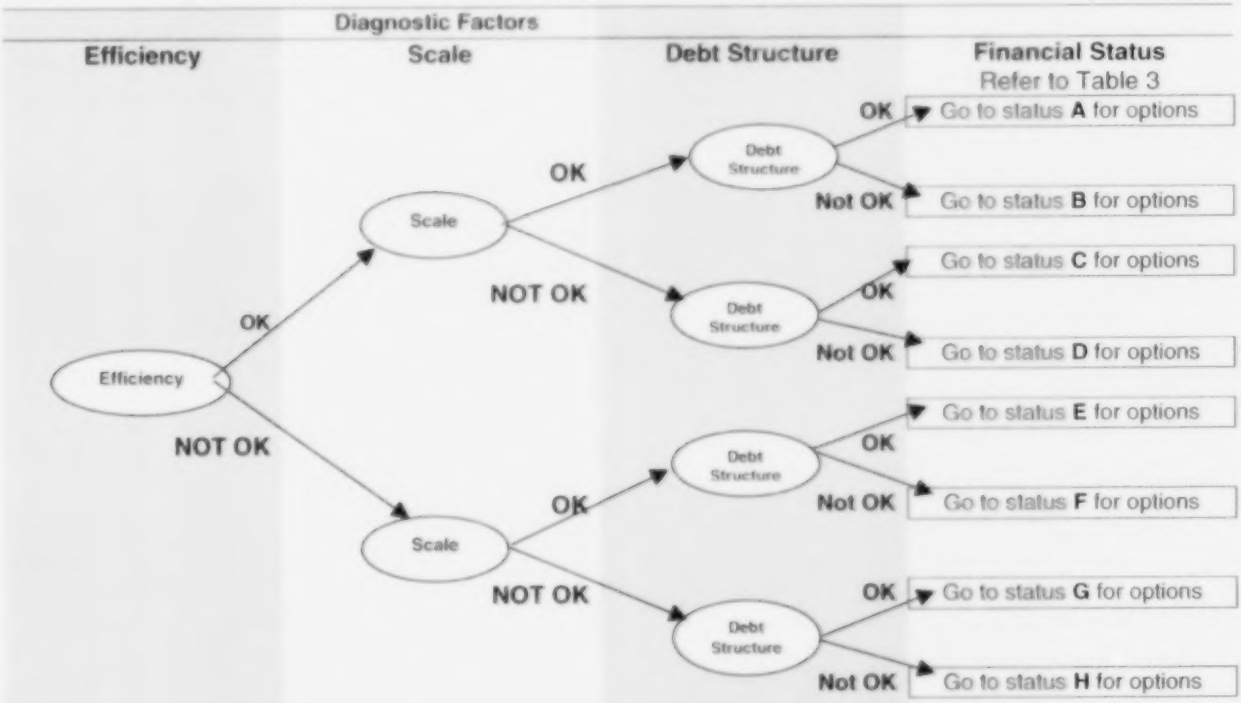
While this oversimplifies the process, it helps show how efficiency, scale and debt structure can be addressed and what action might be appropriate to remedy each problem. The choices facing a farm business can vary quite widely. A farm business with acceptable efficiency but unacceptable scale and debt load faces choices quite different from a farm with poor efficiency, acceptable scale and unacceptable debt load. Further, there is always a question of which problem should be fixed first.

Table 3, Financial Strategies for Change, presents several management courses of action for each branch on the diagnostic tree. The lists are not exhaustive. They simply illustrate ways in which cash flow problems might be resolved, given a farm's efficiency, scale and debt structure.

If you do not want to use the decision tree you can simple use the chart below and then refer to *Table 3*.

	OK	Not OK
Efficiency	☐	☐
Scale	☐	☐
Debt Structure	☐	☐

FIGURE 1. Financial Troubleshooting Diagnostic Tree



Efficiency is measured by the physical and economic output of the business. Look at a combination of physical and economic measurements such as yield per acre or variable costs per acre.

Scale simple refers to the size of the business. The efficiency of the labour usage compared to other similar operations is one method of assessing scale. Farms can be too large or too small. In some cases labour usage is efficient but the overall size of the business is too small to generate sufficient revenue.

Debt structure refers to the factors that determine the size of your principle and interest payments. These factors are interest rate, size of the debt, the length of the term and the proportion of short-term debt to long-term debt can impact the cash flow of the business.

Table 3, *Financial Strategies for Change*, presents several management courses of action for each branch on the diagnostic tree.

TABLE 3. Financial Strategies For Change

Financial Status	Efficiency	Scale	Debt Structure	Strategies for Increasing Profitability or Making Changes
A	OK	OK	OK	• Continue to monitor financial performance • Develop strategic plans, goals and target objectives for the business • Employ cost effective new technology • Examine potential for expansion and additional marketing channels • Consider off-farm investments
B	OK	OK	Not OK	• Restructure debt to improve cash flow • Consider selling assets to reduce debt • Investigate the option of leasing assets
C	OK	Not OK	OK	• If operation is too large consider downsizing or adding staff • If scale is too small ,consider adding or expanding the enterprise • Identify any low cost ways to increase scale of business, such as renting additional land or facilities, custom feeding livestock, crop-share renting vs. cash renting or custom crop farming • Examine machinery, labour and other assets to determine if they are fully utilized • Evaluate if any value added opportunities exist in current business or if higher value products can be produced • Consider increasing off-farm employment, but assess its effect on efficiency
D	OK	Not OK	Not OK	• Consider possible solutions to scale of business first to determine if they would reduce the debt structure issues. Refer to Section C strategies • Refer to Section B for debt structure strategies • Attempt to increase off-farm income, but assess its effect on efficiency • Evaluate if downsizing the business is necessary to allow and increase in off-farm income
E	Not OK	OK	OK	• Analyse records to determine where efficiency must be improved • Focus on 3–5 key areas and use these to set management priorities • Evaluate business operating costs and family living expenditures • Evaluate whether the operation is too large to manage efficiently • Consider if investment in cost effective technology, equipment or facilities would increase efficiency • Evaluate if purchasing key management and/or advisory services would increase efficiency • Consider joint ventures with other farmers as a way to leverage efficiencies • Consider increasing off-farm employment, but assess its effect on efficiency
F	Not OK	OK	Not OK	• Determine if debt structure problems can be reduced or eliminated by correcting efficiency. Refer to Section E • Determine if correcting only the debt structure problem only will cause the problem to develop again in the future if efficiency is not corrected • Refer to Section B debt structure strategies
G	Not OK	Not OK	OK	• Determine if increased efficiency will correct or reduce the scale issues • Refer to Sections E for efficiency and C for scale strategies • If strategies for correcting cash flow are not adequate, evaluate if placing resources in other investments will generate a greater return • Consider off-farm employment opportunities and preferences
H	Not OK	Not OK	Not OK	• Determine if resolving this difficult situation is a primary goal • Seek farm management advisory services to determine if the business plan for correcting the cash flow problem is realistic • Consider the impact on family, health and marriage • Evaluate if exiting the business now will provide the most equity • Refer to above Sections B, C and E for suggested actions

Some of the suggestions listed above will require that you do further analysis. Appendixes 1 through 5 of this Factsheet provide more detail on how to do that.

Appendix 1 — Government Programs
Appendix 2 — Preparing Cash Flow Statements
Appendix 3 — Financial Analysis Resources
Appendix 4 — Meeting With Your Lender
Appendix 5 — Debt Servicing Worksheet

APPENDIX 1 — GOVERNMENT PROGRAMS

Government assistance programs can help in managing cash flow shortages in some cases. If you are preparing a cash flow statement it is important to know what programs you may qualify for. For a complete listing of OMAFRA programs, see the OMAFRA factsheet *Programs and Services for Ontario Farmers*, Order No. 05-083.

Canadian Farm Business Advisory Service

The Canadian Farm Business Advisory Service (CFBAS) provides financial management and business planning counselling to farmers

Under this program, producers can access a total of 5 days worth of planning expertise from a private sector financial planner for a nominal fee of $100. The remaining cost is paid for by government under the Agricultural Policy Framework (APF).

Qualified professionals provide the following:

Farm Financial Assessment:

- up to three days' worth of consultation, at least one day of which would be spent on the farm
- a business profile, and financial statements
- a farm business ratio analysis
- an income and expense statement for the previous three years
- a review of opportunities, goals and options

Action Plan

- two days' worth of consultation to review chosen option and goals and assess the impact of changes
- financial planning, including cash flows and ratio analysis
- strategies
- financial projections of chosen option
- a written report

Follow-Up

- one day of consultation to review farmer file, compare projected to actual, and do a post assessment
- beginning farmers can access three follow-up days of consultations

Contact Information

Phone: 1-866-452-5558

Northern Ontario
Phone: 1-800-461-6132

APPENDIX 2 — PREPARING CASH FLOW STATEMENTS

The cash flow projection is an extremely useful management document. It predicts cash shortages and shows which expenses and revenues have the greatest impact on your business. It also highlights when your credit demands will be the greatest. The cash flow statement does not monitor the changes in receivables, payables and inventory. These can be reviewed by examining your income statement and balance sheet.

Preparation of a Cash Flow Projection

A cash flow projection is an estimate of when and where cash inflow and cash outflow will occur in the coming year. It includes cash inflows from

- farm operations
- borrowing and non-farm sources

and all cash outflows from

- farm operating
- capital purchases
- taxes
- family living
- debt payments

Only cash items are included in the inflows and outflows. Make your projections conservatively. There are two alternatives for preparing a cash flow projection:

Alternative A

To prepare this plan, the records of the previous years are used as a guide and various items are increased or decreased to reflect inflation, changes in acreage or livestock numbers, and capital expenditures.

Alternative B

When previous records are not available or when changes are so great that a new farm business barely resembles the old, it is necessary to start from scratch. Budgets are prepared for each enterprise. These budgets are then moulded together with overhead items and family living expenses.

A cash flow projection may be set up for various time periods, usually monthly, quarterly or annually. If an annual one is prepared as a starting point, it can be easily modified to a quarterly or monthly basis.

Monitoring a Cash Flow Projection

The monitoring of a cash flow projection should be done monthly, quarterly or annually to correspond to the cash flow projection format. Monitoring will reveal differences between the actual and the projected, which allows you to consider what adjustments to the business must be made.

APPENDIX 3 — FINANCIAL ANALYSIS RESOURCES

The following is a list of resources that can help you in preparing a cash flow and other useful analysis information. All are available on OMAFRA's website *www.omafra.gov.on.ca*.

Computer Tools

Farm Business Analyser — an Excel spreadsheet that analyses your business using the figures from your farm income tax statement. It also allows you to analyse the effects of changing revenue, variable expenses and family living costs on your net income.

www.omafra.gov.on.ca →Agriculture →Agricultural Business Management →Tools and Calculators

Farm Financial Analysis and Planning Workbook, Publication 37 — an Excel spreadsheet that has a step by step system for producing a complete set of financial statements including a cash flow, debt servicing worksheet and current and projected income statements.

www.omafra.gov.on.ca →Agriculture →Agricultural Business Management →Tools and Calculators

Ontario Farm Management Analysis Project — The OFMAP program files are computer spreadsheet based workbooks with versions tailored to each major farm commodity group. Each workbook contains comparative information based upon averages of farms received by the project. Comparative data is updated when available.

Each program will produce accrual statements. The program has built in calculations to show financial strength, efficiency, and profitability. Enterprise reports show costs and returns per unit of production.

www.omafra.gov.on.ca →Agriculture →Agricultural Business Management →Cost of Production

Ontario Enterprise Budgets: Enterprise budgets are developed to aid producers in evaluating the economics of production decisions. A range of cost of production budgets are on the OMAFRA website.

The budgets are available in two formats; Budgeting Tools which are Excel spreadsheets and Manual Budget Forms that can be printed directly from this web site and completed by hand.

www.omafra.gov.on.ca →Agriculture →Agricultural Business Management →Cost of Production

APPENDIX 4 — MEETING WITH A LENDER

If an analysis reveals that changes are necessary in the business, then you will usually need to meet with your lender. Your lender may want to know the answers to the following questions so you should be prepared to answer them.

Financial

- How did you arrive at the financial and production estimates? (past records, industry benchmarks)
- Have any major changes occurred to the farm operation lately? What have been the results of the changes?
- Do you keep up-to-date production cost figures?
- How often are accrual income statements prepared?
- Do you have enough cash flow to cover your obligations? (debt serving capacity)
- What is the condition of your assets and do you have fair market values for your assets?
- How are you managing your risk? (insurance, government programs, value added)
- How do you compare to others in your industry? (benchmarks)

Production and Marketing

- What is your marketing strategy?
- What have been the results of this strategy for the past three years?
- Are you planning any changes to your marketing?
- How are you responding to the current market conditions?
- What is your current inventory?
- Is your production mix satisfactory? Are you adjusting your production?
- How does your production compare to others in your industry?
- What technology are you currently using?

APPENDIX 5 — DEBT SERVICING WORKSHEET

Your current **debt-servicing requirement** is the total principal and interest payments you must pay in the coming year.

The **debt-servicing capacity** is the ability to pay annual interest and principal after other cash expenses and family living have been paid.

Debt servicing capacity is usually calculated on a cash basis. The exception is the inclusion of crops in storage. Some banks allow these to be included if they are readily available for sale.

Debt is paid from cash flowing into the business. This would include not only farm sources of cash income but also off-farm and personal income. Likewise on the expense side, farm expenses are not the only requirements for cash. Personal living expenses, income tax and reserve for purchasing assets are also considered.

Table 4 outlines how you first calculate your debt-servicing requirements and then calculate your debt-servicing capacity.

Note that liabilities are usually separated into two types, current and term liabilities.

Current liabilities: items that must be paid in the coming year.
Term liabilities: longer-term obligations that require only a portion of the debt to be paid in the current year. This would include accounts payable, property tax arrears, and bank operating loans.

TABLE 4. DEBT-SERVICING WORKSHEET

DEBT-SERVICING REQUIREMENTS

(When using as a projection, include new loans)

For the Period: Name:

CURRENT LIABILITIES	Balance Start of Year	Interest Rate	Annual Payments		Balance End of Year
			Interest	Principal	
Accounts Payable					
Description					
Total Accounts Payable					
Operating Loan					
Loan Description					
Total Operating Loan					

TERM LIABILITIES	Balance Start of Year	Interest Rate	Annual Payments		Balance End of Year
			Interest	Principal	
Loan Description					
Sub Total					
Grand Total					
Total Interest and Principal Payments					

DEBT-SERVICING CAPACITY

PREVIOUS YEAR		PROJECTED YEAR	
+ Farm Cash Revenue		+ Farm Cash Revenue	
– Farm Cash Expenses		– Farm Cash Expenses	
= Net Cash from Operation		= Net Cash from Operation	
+ Interest Payments		+ Interest Payments	
+ Owner's Contributions		+ Owner's Contributions	
– Owner's Withdrawals		– Owner's Withdrawals	
Cash Available for Principal and Interest	$	**Cash Available for Principal and Interest**	$
Principal and Interest Payments		**Principal and Interest Payments**	
Cash Available after P & I Payments		**Cash Available after P & I Payments**	
Reserve for Asset Acquisition		Reserve for Asset Acquisition	
Debt Servicing Capacity (the amount available for interest and principal payments on new debt)		**Debt Servicing Capacity** (the amount available for interest and principal payments on new debt)	

OTHER OMAFRA BUSINESS FACTSHEETS

Business Structures Series

Farm Corporations, Order No. 01-057
Farm Partnerships, Order No. 02-047
Farm Business Joint Ventures, Order No.02-069
Forming a Cooperative, Order No. 02-019
New Generation Cooperatives, Order No. 02-017

Land Leasing Series

Crop Share Lease Agreements, Order No. 01-067
Flexible Cash Lease Agreements, Order No. 01-069
Land Lease Arrangements, Order No. 01-065
Lease Agreements for Cropland, Order No. 01-071

Farm Management and Taxation Series

Budgeting Farm Machinery Costs, Order No. 01-075
Canada Pension Plan, Order No. 06-065
Farm Business Insurance, Order No. 00-041
Field Crop Budgets (annual), Publication 60
Guide to Custom Farmwork and Short-Term Equipment Rental, Order No. 05-071
Leasing Farm Equipment, Order No. 01-003
Ontario Farm Record Book, Publication 540
Programs and Services for Ontario Farmers, Order No. 05-083
Taxation on the Sale of Farm Business Assets, Order No. 03-021
Taxation on the Transfer of Farm Business Assets to Family Members, Order No. 03-023

This Factsheet was written by **Rob Gamble**, Finance and Business Structures, Program Lead, Agriculture and Rural Division, OMAFRA, Guelph.

Sections of this Factsheet were modified, with permission, from an Iowa State University Extension publication called *Financial Troubleshooting* authored by **Robert W. Jolly** and **Alan Vontaige**.

FOR YOUR NOTES

Agricultural Information Contact Centre
1-877-424-1300
ag.info@omafra.gov.on.ca

www.omafra.gov.on.ca

POD
ISSN 1198-712X
Également disponible en français
(commande n° 06-086)